

# MC "DOUBLE-CHANNEL"

## Submersible pumps

for sewage water



### PERFORMANCE RANGE

- Flow rate up to **1600 l/min** (96 m<sup>3</sup>/h)
- Head up to **25 m**

### APPLICATION LIMITS

- **10 m** maximum immersion depth with a sufficiently long power cable
- Maximum liquid temperature **+40 °C**
- Solids passage:
  - up to **Ø 50 mm** for MC 15-20-30-40/50
  - up to **Ø 70 mm** for MC 30-40/70
- Minimum immersion depth for continuous service:
  - **390 mm** for MC 15-20-30-40/50
  - **430 mm** for MC 30-40/70

### CONSTRUCTION AND SAFETY STANDARDS

- Complete with **10 m** long power cable
- Float switch for single-phase versions

EN 60034-1  
IEC 60034-1  
CEI 2-3



### CERTIFICATIONS



### INSTALLATION AND USE

MC series pumps, made from heavy gauge cast iron offering exceptional sturdiness, abrasion resistance and durability, come equipped with a DOUBLE-CHANNEL impeller and are capable of pumping liquids containing short fibred suspended solids. They are ideal for pumping **sewage, waste water, water mixed with mud, groundwater and surface water** in locations such as apartment blocks, public buildings, factories, tower garages, underground car parks and cleaning areas, etc.

### PATENTS - TRADE MARKS - MODELS

- Registered Community Design n° 342159-0017

### OPTIONALS AVAILABLE ON REQUEST

- QES control box for three-phase pumps
- Single-phase pumps without float switch
- Other voltages or 60 Hz frequency

### GUARANTEE

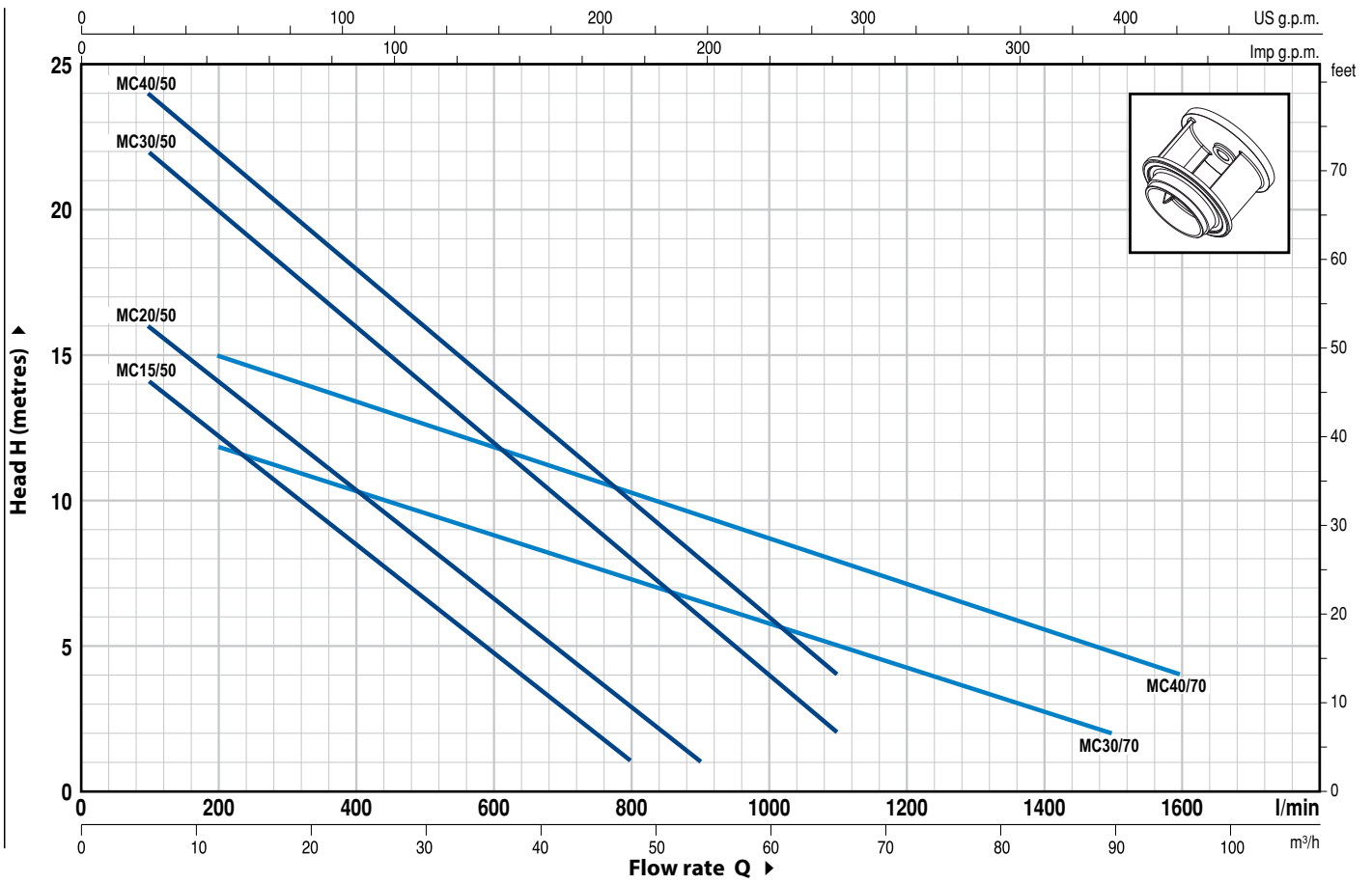
2 years subject to terms and conditions

For the following versions the built-in thermal overload protector must be connected to the control box in order for the guarantee to be considered valid:

- |                    |                                    |
|--------------------|------------------------------------|
| single-phase       | three-phase                        |
| – MCm 30/50 - HP 3 | – MC 15-20-30-40/50 - HP 1.5-2-3-4 |
| – MCm 30/70 - HP 3 | – MC 30-40/70 - HP 3-4             |

**CHARACTERISTIC CURVES AND PERFORMANCE DATA**

**50 Hz n= 2900 1/min**



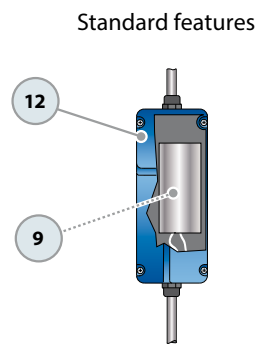
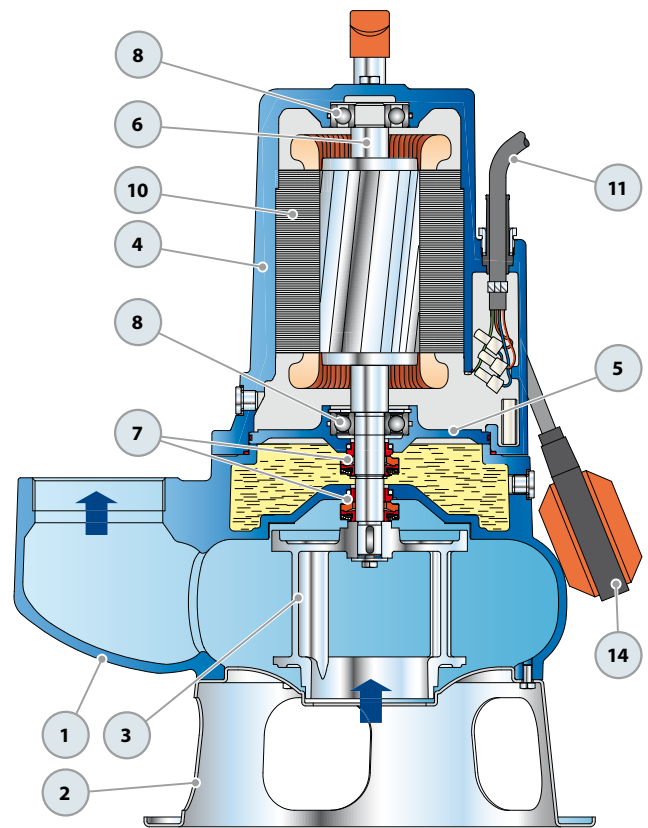
MODEL		POWER		Q	Flow rate																
Single-phase	Three-phase	kW	HP		m <sup>3</sup> /h	0	6	12	18	24	30	36	42	48	54	60	66	72	84	96	
MCm 15/50	MC 15/50	1.1	1.5	H metres	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600		
MCm 20/50	MC 20/50	1.5	2		16	14	12.5	10.5	8.5	6.5	4.5	3	1								
MCm 30/50	MC 30/50	2.2	3		18	16	14	12.5	10.5	8.5	6.5	5	3	1							
-	MC 40/50	3	4		24	22	20	18	16	14	12	10	8	6	4	2					
MCm 30/70	MC 30/70	2.2	3		25	24	22	20	18	16	14	12	10	8	6	4					
-	MC 40/70	3	4		13	-	12	11	10.5	9.5	8.5	8	7.5	6.5	6	5	4.5	3	2		
					17	-	15	14	13.5	12.5	12	11	10.5	9.5	8.5	8	7	5.5	4		

Q = Flow rate H = Total manometric head

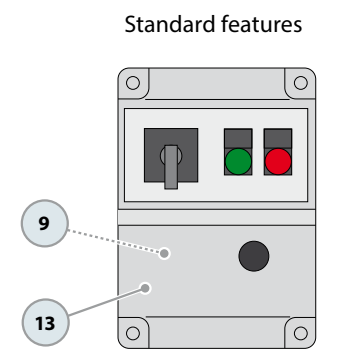
Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

# MC "DOUBLE-CHANNEL"

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	<b>PUMP BODY</b>	Cast iron, with threaded port in compliance with ISO 228/1				
2	<b>BASE</b>	Stainless steel AISI 304				
3	<b>IMPELLER</b>	Stainless steel AISI 304 DOUBLE-CHANNEL type				
4	<b>MOTOR CASING</b>	Cast iron				
5	<b>MOTOR CASING PLATE</b>	Cast iron				
6	<b>MOTOR SHAFT</b>	Stainless steel AISI 431				
7	<b>TWO MECHANICAL SEALS SEPARATED BY AN OIL CHAMBER</b>					
	<i>Seal</i>	<i>Shaft</i>	<i>Position</i>	<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Materials</i>
	<i>Model</i>	<i>Diameter</i>				<i>Elastomer</i>
	<b>STA-20</b>	Ø 20 mm	Motor side	Ceramic	Graphite	NBR
	<b>STA-19</b>	Ø 19 mm	Pump side	Silicon carbide	Silicon carbide	NBR
8	<b>BEARINGS</b>	<b>6304 ZZ - C3 / 6304 ZZ - C3</b>				
9	<b>CAPACITOR</b>					
	<i>Pump</i>	<i>Capacitance</i>				
	<i>Single-phase</i>	<i>(230 V or 240 V)</i>				
	<b>MCm 15/50</b>	<b>31.5 µF 450 VL</b>				
	<b>MCm 20/50</b>	<b>50 µF 450 VL</b>				
	<b>MCm 30/50</b>	<b>60 µF 450 VL</b>				
	<b>MCm 30/70</b>	<b>60 µF 450 VL</b>				
10	<b>ELECTRIC MOTOR</b>					
	<b>MCm 15-20:</b> single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding					
	⇒ <b>MCm 30:</b> single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding to be connected to the control box					
	⇒ <b>MC:</b> three-phase 400 V - 50 Hz. with thermal overload protector built-in to the winding to be connected to the control box					
	– Insulation: F class					
	– Protection: IP X8					
11	<b>POWER CABLE</b>					
	<b>10 metre</b> long "H07 RN-F" cable					
12	<b>CONTROL BOX for MCm 15-20</b>					
	(only for single-phase versions)					
	Complete with capacitor and manual reset motor protector					
13	<b>CONTROL BOX for MCm 30</b>					
	(only for single-phase versions)					
	<b>QES 300 MONO</b> series					
14	<b>FLOAT SWITCH</b>					
	(only for single-phase versions)					

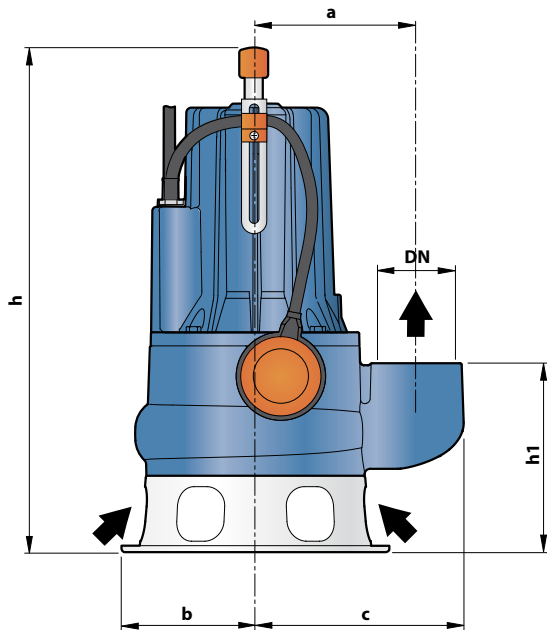


Control box for MCm 15-20 (only for single-phase versions)

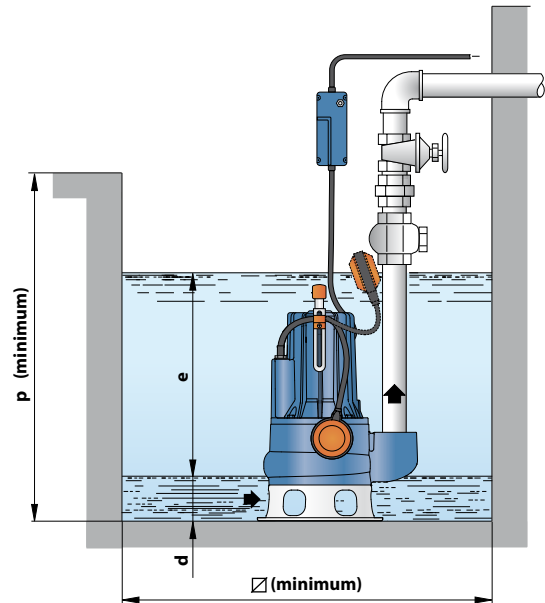


Control box for MCm 30 (only for single-phase versions)

## DIMENSIONS AND WEIGHT



Typical installation



MODEL		PORT DN	solids passage	DIMENSIONS mm									kg	
Single-phase	Three-phase			a	b	c	h	h1	d	e	p	Ø	1~	3~
MCm 15/50	MC 15/50	2½"	Ø 50 mm	162	135	210	509	191	75	variable	800	800	36.7	35.4
MCm 20/50	MC 20/50						522/509						37.7	36.4
MCm 30/50	MC 30/50						522						41.9	38.6
-	MC 40/50						562/548						-	42.2
MCm 30/70	MC 30/70	3"	Ø 70 mm	180	150	237	562	233	85				45.0	41.7
-	MC 40/70						562						-	45.3

## ABSORPTION

MODEL	VOLTAGE (single-phase)	
	230 V	240 V
Single-phase	230 V	240 V
MCm 15/50	9.0 A	9.0 A
MCm 20/50	10.5 A	10.5 A
MCm 30/50	15.2 A	15.2 A
MCm 30/70	15.2 A	15.2 A

MODEL	VOLTAGE (three-phase)					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
MC 15/50	5.5 A	3.2 A	1.8 A	5.5 A	3.2 A	1.8 A
MC 20/50	7.4 A	4.3 A	2.5 A	7.4 A	4.3 A	2.5 A
MC 30/50	9.9 A	5.7 A	3.3 A	9.9 A	5.7 A	3.3 A
MC 40/50	13.5 A	7.8 A	4.5 A	13.5 A	7.8 A	4.5 A
MC 30/70	10.2 A	5.9 A	3.4 A	10.2 A	5.9 A	3.4 A
MC 40/70	13.5 A	7.8 A	4.5 A	13.5 A	7.8 A	4.5 A

## PALLETIZATION

MODEL		GROUPAGE / CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	
				1~	3~
MCm 15/50	MC 15/50	24	1751	899	867
MCm 20/50	MC 20/50	24	1751	923	891
MCm 30/50	MC 30/50	24	1751	1023	944
-	MC 40/50	24	1751	-	1031
MCm 30/70	MC 30/70	12	1304	557	517
-	MC 40/70	12	1304	-	561

